Jan. 8, 1935. L. J. BREDL 1,987,547

LOCALIZED MULTIPLE FUSE FOR ELECTRIC SWITCH ASSEMBLIES

Filed Jan. 29, 1934

Fig. 1.

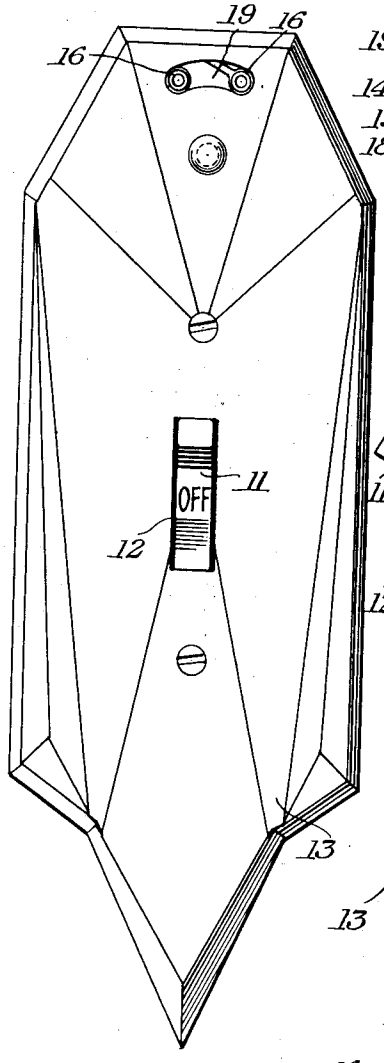


Fig. 3.

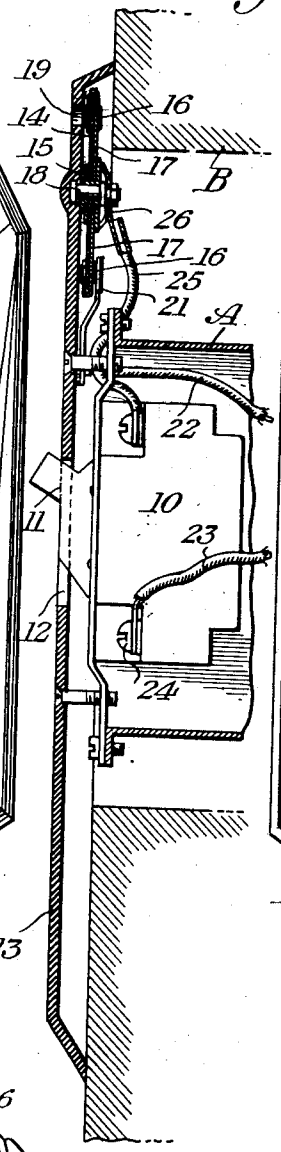


Fig. 2.

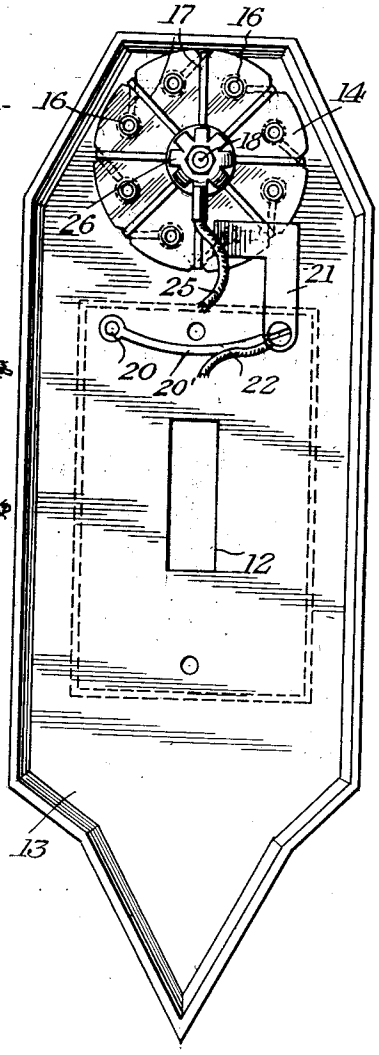
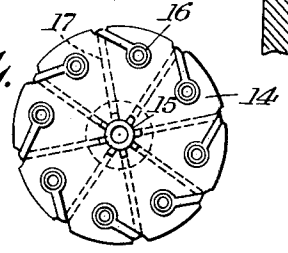


Fig. 4.



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LOCALIZED MULTIPLE-FUSE FOR ELECTRIC SWITCH ASSEMBLIES

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2 Claims. (Cl. 200—125)

The invention relates to a localized multiple-fuse for an electric switch assembly.

The primary object of the invention is the provision of a fuse of this character, wherein the same is arranged localized with respect to an electric hand switch and is readily accessible so that when a fuse becomes destroyed a new fuse can be brought into operative position in substitute for the destroyed fuse, thus eliminating the necessity of a person being required to go to a distant point for fuse replacement, the replacement being usually located within a cellar of a building, and such inconvenience being entirely eliminated and at the same time the replacement of a fuse being had with dispatch.

Another object of the invention is the provision of a fuse of this character, wherein the fusible elements are multiple and carried upon an insulating wafer in a manner that such elements can be successively brought into position for replacement of a burnt or blown fuse and such wafer is mountable upon the cover plate of a switch box and is accessible for the adjustment of said wafer for fuse replacements as the occasion may require, thus eliminating the use of the conventional fuse plug, either of the single or multiple-fuse type.

A further object of the invention is the provision of a fuse of this character, wherein the construction thereof and its mounting is novel in form and localizes the fuse with respect to an electric hand switch so that it is convenient and susceptible of being actuated with dispatch.

A still further object of the invention is the provision of a fuse of this character which is extremely simple in construction, thoroughly reliable and efficient in its purposes, readily adjusted and replaced, and inexpensive to manufacture and install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawing:

Figure 1 is an elevation of a switch having in its assembly the fuse constructed in accordance with the invention.

Figure 2 is a rear elevation of the cover plate for the switch box, showing the fuse carried thereby and one fusible element of such fuse being disclosed burnt or blown.

Figure 3 is a vertical longitudinal sectional view through the switch box and the assembly of the switch.

Figure 4 is a detail plan view of the fuse detached.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates generally a portion of a switch box, this being of conventional kind and countersunk in a support or wall, a portion thereof being designated at B. Within the switch box is located the switch block 10 having the hand operated trigger switch 11 of conventional style working through a suitable clearance 12 in a cover plate 13 which may be ornamented or of any design desirable, the same being removably fastened to the support or wall B to conceal the switch box A within the recess therefor in said support or wall.

Adapted to be carried at the inner face of the plate 13 is a multiple-fuse comprising an insulating disk or wafer 14 having at its center a metallic eyelet 15, while next to the periphery of said disk or wafer, at equidistances apart, are the metallic eyelets 16, and radially arranged at one face of said disk or wafer 14 are the fusible strip-like elements 17, these being engaged at their inner ends with the eyelet 15 and at their outer ends with the eyelets 16. Carried by the plate 13 is a stud 18 on which is removably fitted for rotation the multiple-fuse including the disk or wafer 14 and the fusible elements 17. The plate 13 has formed therein an arcuate-shaped slot 19 which is adapted to register with the eyelets 16 of the multiple-fuse and this slot 19 is of an extent to permit of manual adjustment of the fuse to properly locate one of its fusible elements 17 in the electric circuit having the switch block 10 and switch trigger 11 therein, the fuse being movable for replacement of a fusible element through the instrumentality of a suitable implement engageable in a selected eyelet 16 so that the disk or wafer 14 can be turned for use replacement in the electric circuit.

Arranged on the inner face of the plate 13 beyond the periphery of the disk or wafer 14 and at opposite sides of its axis of rotation, are the sockets 20, these being connected by a jump wire 20', and permanently engaged with one of the sockets 20 is the contact 21, while adapted for interchangeable engagement with the respective sockets 20 is the lead wire 22 of the electric

circuit, the other lead wire 23 being engaged with a binding post 24 of the switch block 10 the switch block 10 being in circuit between the said post 24 and the pigtail wire connection 25 carrying the spider contact 26 engageable upon the stud 18 and common to the respective fusible elements 17 of the device. The contact 21 is engageable with the fusible elements 17 and has a wiping action thereon. The interchangeable feature is convenient according to the wiring of the switch block 10.

It will be understood, of course, that the blow-out occurring at the switch affects only that particular circuit including said switch, or, in other words, the one room in which the blow-out occurs is the only room affected.

The multiple-fuse is suitable for a service switch or a service plug, as should be apparent.

It should be apparent that by reason of an overload of the electric circuit having the switch block 10 therein the operative fuse elements 17 will blow or burn out, it then becoming necessary, through the use of a suitable instrument, to engage it through the slot 19 with an eyelet 16 in the multiple-fuse and then rotate the disk or wafer 14 either clockwise or counterclockwise the full length of said slot, which will bring a fresh or unburnt fuse element 17 into position with the contact 21 for replacement of the burnt or blown fuse, thus reestablishing the circuit. It will be apparent that the multiple-fuse is localized with respect to the switch trigger 11 and is convenient for replacing burnt fuses with dispatch.

What is claimed is:

1. In a fuse of the kind described, an insulation wafer of disk form having a plurality of radially disposed fusible elements, an eyelet centrally of the wafer and common to said fusible elements, a plurality of eyelets arranged peripherally of said wafer and engaged by said fusible elements, a switch box cover plate having a slot therein, and means for mounting the wafer at the inner side of the plate to locate successively the fusible elements within an electric circuit and the peripherally arranged eyelets accessible through said slot.

2. In a fuse of the kind described, an insulation wafer of disk form having a plurality of radially disposed fusible elements, an eyelet centrally of the wafer and common to said fusible elements, a plurality of eyelets arranged peripherally of said wafer and engaged by said fusible elements, a switch box cover plate having a slot therein, means for mounting the wafer at the inner side of the plate to locate successively the fusible elements within an electric circuit and the peripherally arranged eyelets accessible through said slot, and a contact for a lead of said circuit and the fusible elements and mountable interchangeably at opposite sides of the switch box.

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